

Title (en)

Fiber optic scanning system for laser/thermal inspection.

Title (de)

Abtastsystem mit Lichtleitfasern für die laserinduzierte thermische Prüfung.

Title (fr)

Système de balayage à fibres optiques pour l'inspection thermique par laser.

Publication

EP 0105078 A1 19840411 (EN)

Application

EP 83103993 A 19830423

Priority

US 42939782 A 19820930

Abstract (en)

[origin: US4481418A] An apparatus for inspecting a device made up of a plurality of different infrared radiating elements includes an optical head which is moveable along X-Y coordinates above the fixed device to sequentially scan the infrared radiating elements. A laser beam source is operatively connected to the moveable head for injecting thermal energy into the infrared radiating elements and an infrared detector is provided for sensing the infrared radiation emanating from the elements. The infrared detector may be mounted directly on the moveable head or in a remote location wherein the detector would be connected to the moveable head by a flexible optical fiber. A second moveable head may be located on the opposite side of the device so that thermal energy from the laser source may be injected into opposite sides of the infrared radiating element.

IPC 1-7

G01N 25/72

IPC 8 full level

G01N 21/88 (2006.01); **G01N 21/956** (2006.01); **G01N 25/72** (2006.01); **G01R 31/309** (2006.01); **H01S 3/00** (2006.01); **G01R 31/04** (2006.01); **G02B 21/00** (2006.01)

CPC (source: EP US)

G01N 25/72 (2013.01 - EP US); **G01R 31/309** (2013.01 - EP US); **G01R 31/71** (2020.01 - EP US)

Citation (search report)

- [A] WO 8103704 A1 19811224 - VALMET OY [FI], et al
- [A] GB 1327082 A 19730815 - VANZETTI INFRARED COMPUTER SYS
- [A] US 3678276 A 19720718 - LAMPI RAUNO A, et al
- [A] GB 1375121 A 19741127
- [A] LASER FOCUS, vol. 16, no. 6, June 1980, Newton "Yag-laser inspection of solder joints would speed processing of pc boards", page 46
- [A] ELECTRONICS INTERNATIONAL, vol. 54, no. 14, July 1981, New York L. LOWE "Lasers automate pc-board inspection", pages 96, 98, 99

Cited by

DE4040101A1; GB2358466A; EP0586902A1; EP0427943A1; FR2602052A1; DE102006025524A1; EP0586901A1; DE4343076A1; FR2647547A1; EP0394932A3; US5118945A; DE3813258A1; EP1882579A1; DE4203272A1; DE3820862A1; WO8601893A1

Designated contracting state (EPC)

BE DE FR GB IT

DOCDB simple family (publication)

EP 0105078 A1 19840411; **EP 0105078 B1 19890322**; DE 3379480 D1 19890427; JP S5961761 A 19840409; US 4481418 A 19841106

DOCDB simple family (application)

EP 83103993 A 19830423; DE 3379480 T 19830423; JP 7920783 A 19830506; US 42939782 A 19820930